Instructions and Itinerary for Geologic Field Trip
for High School Science Teachers
Kewanee, Illinois, September 17, 1938

Sponsored by State Geological Survey
M. M. Leighton, Chief
Directed by Don L. Carroll
Leader: George E. Ekblaw

General Instructions:

1. Please be prepared to leave promptly at 9:00 a.m.

2. Cars will assemble headed north on east side of South Burr Street, at west side of High School; the leaders' car will be at the southeast corner of the intersection of South Burr and East Central streets.

3. Participants will provide themselves with lunches before starting.

4. At scheduled stops, please assemble promptly near leader to hear his discussion before scattering for individual examination of points of interest; also please be prompt to leave upon signal. This is especially desirable if the group is large.

Instructions for car drivers:

To expedite the trip and for safety, please

1. Identify your car by attaching one of the tags provided.
2. Have your car in line before the trip starts.
3. Follow carefully and keep fairly close to the car ahead, with due regard to safety.
4. Keep all gaps in the caravan closed, especially while traveling through the city, in order to prevent other cars from inserting themselves in the caravan or crossing the caravan at intersections.
5. Watch the cars ahead and behind for signals.
6. Keep your place in the caravan so far as possible; do not attempt to pass ahead of any in the caravan unless they drop out of line, nor to gain an advanced position at stops.
7. If for accident or other reason you drop out of line, let those following you proceed, except for such help as may be needed; in case of accident to the rear car of the caravan, signal those ahead.
8. Any car dropping out of line shall take up the rear when rejoining the caravan.
9. When parking in line at stops, draw close to the car ahead; when parking parallel, do not leave unnecessary space between cars.
10. One passenger in each car, preferably sitting beside the driver, should read the itinerary and keep the driver adequately informed with regard to stops, turns, etc.

Itinerary

| | |
|---|---|
| 0.0 | Corner of South Burr and East Central streets. Turn left (west). |
| 0.1 | Stop street - State Highway No. 78 (Main Street). Turn right (north). |
| 0.2 | Traffic light. Straight ahead. |
| 0.4 | Railroad crossing, several tracks. Gates. |
| 1.5 | The ridge-and-valley character of the topography between Kewanee and Stop No. 1 should be carefully observed and the frequency of gob-heaps from old mines should be noted. |
| 4.2 | A one-foot layer of brecciated limestone crops out in the cut on the east side of the highway. |
| 7.1 | Stop No. I. (Opposite Blinn School). Here is the boundary between the Illinoian glacial drift on the south and the Wisconsin glacial drift on the north. The difference in the ages of the drifts is strikingly reflected in the difference in their topography. Almost complete systems of valleys have been eroded in and through the Illinois drift into the underlying bedrock, leaving drift-mantled rock ridges between alluvial-filled valleys. The Wisconsin drift, believed to belong to the Shelbyville advance, has been but little affected by erosion and retains essentially its original swell-and-swale undulations; it constitutes a moraine on the south side of the local glacial lobe that advanced into the old Green and Rock river valleys cut into the Illinoian drift. |
| 8.0 | Turn left (west) on gravel road. |
| 8.6 | Outlook across valley to south, showing the typically eroded Illinoian drift plain and little eroded Wisconsin drift. |
| 9.0 | Turn left (south). |
| 9.3 | Turn right (west). The contrast between the topography on the Illinoian drift and that on the Wisconsin drift is again well shown in the view to the east. |
| 11.4 | Another fine outlook south across the Wisconsin drift to the higher, more eroded Illinoian drift plain. |
| 11.8 | Cross-roads - turn left (south). |
| 12.9 | Across Mud Creek valley to southwest the relative elevations and differential topography of the Wisconsin and Illinoian drifts may be again observed. |
| 13.4 | Cross-roads - turn left (east). The contrast between the drifts may be observed on either side and ahead. |
| 13.6 | Boundary between Wisconsin and Illinoian drifts. Note rise in elevation. |
| 13.9 | Cross-roads - turn right (south). |
| 14.4 | Stop No. II. Exposure, in downward succession, of (1) Peorian (Wisconsin) loess, (2) Late Sangamon loess, and (3) Early Sangamon gumbogravel developed on Illinoian drift. The contrast of the Wisconsin and Illinoian drifts may again be seen across Mud Creek valley on the west. The lower part of this valley was filled by the Wisconsin glacier; the upper part was then a lake. Shale crops out along road on south side of hill. |

14.9 Bear left.
15.1 Y-road - turn right over bridge over Mud Creek. Note broad bottom of valley, representing lake fill, and terraces along sides.
15.4 A good example of a terrace remnant may be seen on the east (left). The road here is also on a remnant of the same terrace.
16.0 Turn left (east).
16.2 Bear right (southeast).
16.3 Bear right (south).
17.5 T-road - Turn right (west).
18.5 T-road - Turn left (south). Splendid view southeast towards Kewanee, across eroded Illinoian drift plain.
19.3 Turn left (east).
20.1 Sharp turn right (south).
20.7 T-road - turn right (west).
20.8 T-road - turn left (south).
20.9 Stop No. III. A. Exposure of ideally typical gumbotil along roadside ahead.
B. Exposure of essentially a complete cyclothem, the Brereton, of Pennsylvanian ("Coal Measures") formations, at T-road behind, as follows:

| | Feet | Inches |
|---|---|---|
| Coal | 1 | 4 |
| Clay parting | | 1/8-1/4 |
| Coal | | 8 |
| Clay ("blue-band") | | 2-3 |
| Coal No. 6 coal | | 5 |
| Clay | | 7/8 |
| Coal | | 3 |
| Clay | | 1/4 |
| Coal | | 7 |
| Underclay, dark gray | | 9 |
| Clay, brownish-gray (underclay?) | | 10 |
| Clay, buff | | 14 |
| Limestone, conglomeratic or brecciated, gray | 1 | 0 |
| Limestone, massive, buff to rusty brown, nodular | 2 | 0 |
| Clay, very calcareous, with numerous limestone nodules | 1 | 0 |
| Sandstone, micaceous, soft, slightly calcareous, grading to thin-bedded, shaly, and non-calcareous (Cuba sandstone) | 12 | 0 |
| Shale, sandy, gray, soft | 4 | 0 |

21.0 Stop. State Highway No. 81. Turn left (east)
22.8 Stop. State Highway No. 78 (Main Street of Kewanee). Turn left (north)
23.2 Entrance to Northeast Park. Turn right (east) into park.
23.5 Parking area. Stop No. IV. Lunch. After lunch assemble for discussion.

23.8 Park exit - turn right (north) on State Highway No. 78.
26.3 Turn right into lane to gravel pit.
26.5 Stop No. V. Gravel pit in high-level deposit in lake created by Wisconsin glacier damming Mud Creek. Note the slope of the beds, the poor sorting of the gravel, and the advanced weathering of the boulders. Terrace remnants at the same level are visible along the valley.
26.8 Turn right (north) on highway.
28.0 Note local remnant of flat upland plain of Early Illinoian drift along the road at this point and the more undulatory topography of the later Illinoian moraine ahead and to the north.
29.8 Note topographic character of Wisconsin drift plain ahead.
32.8 Border between Wisconsin drift (Shelbyville) and Wisconsin outwash plain (Bloomington-Normal).
33.4 Stop No. VI. Exposure of gravel in Bloomington outwash plain.
34.5 Stop. Highway intersection in Annawan. Straight ahead. Annawan is located at the edge of a lower level of outwash, which is covered by silt, muck, and marl.
35.3 Bridge over old Illinois and Mississippi Canal.
37.4 Stop No. VII. Sand hills. Secondary dunes on ridges of outwash.
38.0 Cross-roads - turn around.
41.5 Stop - highway intersection in Annawan. Turn right (west) on U. S. Highway No. 32.
46.0 Entrance to plant of Midland Electric Coal Company.
46.8 Entrance to Midland Electric Coal Company strip mine, Stop No. VIII, in which is exposed the following section of formations belonging to the Liverpool cyclothem:

| | Feet | Inches |
|---|---|---|
| Shale, bluish-gray, soft, fossiliferous | | 6 |
| Limestone, fossiliferous | 1 | |
| Shale, soft, calcareous | 1 | |
| Limestone concretions, fossiliferous | | 3 |
| Shale, soft, thin-bedded | 1 | 4 |
| Shale, calcareous, or shaly limestone, fossiliferous | 1 | 2 |
| Shale, fairly hard, calcareous, with some concretions, fossiliferous | 7 | |
| "Slate", black, hard, fossiliferous | 2 | 3 |
| Coal No. 2, irregular surface with relief of 5-10 feet | | |

Disband.